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Infrastructure Advisory Council

Meeting Minutes

November 3, 2021

Attendees

- Colleen Bailie — West Haven Public Library
- Joe Campbell — Connecticut Technical High School System
- Doug Casey — Connecticut Commission for Educational Technology
- George Claffey — Central Connecticut State University
- Tom Dillon — Independent
- Karen Fildes — New Fairfield Public Schools
- Fred Kass — Trinity College
- Kerri Kearney — Manchester Public Schools
- Ryan Kocsondy — Connecticut Education Network (CEN)
- Michael Mundrane — University of Connecticut
- Rick Widlansky — Libraries Online (LiOn)

Agenda

- Collection of Digital Divide Data
- Feedback on Digital Learning Survey
- Eduroam Survey and Legal Terms

Welcome

Infrastructure Advisory Council Chair Tom Dillon called the meeting to order at 1:00 PM and welcomed the members in attendance. He thanked them for their continued participation in the group's discussions, providing key input for the Commission's consideration and action.

Collection of Digital Divide Data

Tom opened discussion around the first topic, how states capture data around student access to the Internet and devices, inviting Doug to provide additional context. Given the considerable state and national effort to get students online and equipped with computers, collection of data to identify and address the "digital divide" varies significantly across states. Doug referred to a recent report from the State Educational Technology Directors Association (www.bit.ly/SETDA-Dig-Divide-Data) that he shared prior to the meeting, which provides a landscape of how states collect information about student access and recommendations to standardize this process nationally. The proposed, uniform data collection would follow the [standards](#) developed by the Council of Chief State School Officers (CCSSO). He opened the floor for members to



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share their thoughts on establishing a standard data collection tool and possible ways to go about accomplishing that goal, such as submitting recommendations to the Connecticut General Assembly.

Members of the Advisory Council addressed the purpose of such a data collection, current practices, and suggestions for the Commission to consider. Ryan Kocsondy began by asking how the data would be used and why. Michael Mundrane suggested that a statewide collection would serve two purposes: identify those students who need a home Internet connection for learning, and quantify the "problem" of disconnected learners. He asked whether an existing data set exists to address these challenges, whether a measure of connectivity rates or a proxy for that information (e.g., socioeconomic status).

Several school leaders shared their experiences in collecting data around at-home connectivity. Kerri Kearney of Manchester Public Schools stated that her district does collect minimal information at the start of the school year, though response rates remain low, as parents often experience "survey fatigue." Karen Fildes agreed, stating that New Fairfield Public Schools sees response rates around 20 percent, and surveys are often incomplete. Phone surveys during COVID indicated that connectivity rates at home remain high for students in her town. Among those who did not have a home Internet connection, a high percentage did not even want one. She reminded the group that not all disconnected families want access. Kerri stated that Manchester also conducted phone surveys during COVID-related school closures but questioned the accuracy of the responses.

Michael raised the question of survey design and sampling, whether exhaustive data collection from all families was necessary or whether a targeted sample might provide an accurate estimate of the number of disconnected students. The key would be to get a representative sample that would not skew the results based on self-selection (e.g., those who are already connected, those who do not want access, etc.). Karen agreed and reminded the group that the point is to connect students who do not have and do want Internet access. Of secondary importance is identifying those families (A) who are currently connected as well as those who neither have nor want home Internet access. Tom Dillon agreed, underscoring the top priority of reaching families in need.

The group briefly discussed how cable Internet carriers could help identify disconnected families. These companies know what families they currently serve, the speeds and services delivered, as well as those residential addresses they offer service to but do not connect. Ryan expressed that carriers' have demonstrated resistance to sharing this information. Regardless of cable companies' willingness to share data, Michael could not see a way of collecting exhaustive, accurate data without access to the aggregate records the carriers possess.



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Advisory Council members briefly touched on the importance of broadband allocations per student. The current national standard for speeds of 25 Mbps down and 3 Mbps up may well serve individual learners who are streaming instructional videos or engaging in remote classroom activities. However, that allocation to an entire household with multiple students and adults would likely result in slow, poor connectivity, vying against student engagement and learning. Ryan shared an overview from CEN concerning the broadband demands of remote learning, with case studies on how bandwidth needs increased in the past year and a half.

Shifting the focus from schools, Doug asked Colleen Bailie about how libraries measure the digital divide. She noted that while her library and most others do not conduct connectivity surveys of patrons, informal observations provide some indication of families who may not have home Internet connections. She has seen in West Haven Public Library many parents and children who come in to use shared computers and wireless Internet connections. She highlighted another concern, in that many adults, especially older ones, do not recognize the benefits of Internet access for activities such as applying for jobs, accessing state services, etc. For that reason, educating patrons on the value of getting online remains essential to increasing connectivity rates. Michael agreed and stated that access to a device and broadband has become a requirement for fully engaging in society.

The group concluded the discussion by offering several recommendations for the Commission to consider:

- Endorse and Share Model Data Collection Instrument: Kerri suggested that at a minimum the Commission could encourage adoption by schools of the CCSSO standards or some other data-collection instrument.
- Survey on Surveys: Perhaps in tandem with the first suggestion, Kerri also presented the opportunity for the Commission to ask schools what data they currently collect (not the data itself). Doing so would provide some indicator of the questions asked, information gathered, how districts use the data, and average response rates.
- Statewide Survey: Joe Campbell noted that the State Department of Education does not request data from schools that is not mandated by federal or state statute and would not likely mandate a collection around device and Internet access. He did suggest that CEN could request this data from its members. Ryan appreciated the suggestion but did not see such a survey as fitting well with CEN's role as a middle-mile network that connects institutions rather than students at home. He suggested that the Commission could design a survey and request district responses, with CEN helping with outreach to its members to encourage participation.
- Pilot Program: Fred Kass offered the idea of running a pilot survey, perhaps by enlisting a subset of schools to participate. Assessing response rates and quality



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of data collected might provide better insights into the feasibility of a statewide survey.

Doug welcomed these suggestions and provided additional context to why connecting students at home remains important to the Commission and schools. A statewide report from May of 2020 indicates that most districts conducted a collection of data around the digital divide even before the pandemic (see "[School Technology: Current and Planned Investments to Support Remote Learning](#)"). While full-time remote learning has ended, the state as a whole has invested heavily in technology for learning. Even before the pandemic — and especially afterward — students depended on computers and home Internet to complete homework, conduct research, and stay on top of assignments via digital learning systems. Being disconnected means not being able to participate fully in school, even if they attend in-person classes during the day. George Claffey echoed these ideas, stating that the shift to remote learning in 2020 – 21 provided teachers and school leaders with insights and infrastructure that will help establish a new baseline for learning.

Feedback on Digital Learning Survey

Prior to the Infrastructure Advisory Council meeting, Doug had provided a report on responses to a survey that the Commission conducted between July 8 and September 17, with one simple question: "What about technology use during the pandemic is worth keeping as we return to in-person education?". He shared that response levels were much lower than expected, with 190 individuals completing the survey, most of whom were K – 12 teachers (140 total) or parents of school-aged children (31 total). Suggestions from those participants fell into a few general categories: continuing online parent-teacher meetings, use of learning-management systems, allowing inclement weather (e.g., snow) learning to count toward the State-mandated annual minimum of 180 instructional days, and long-term funding to support device replacement and home Internet connections.

Advisory Council members did not draw any significant conclusions from the survey that the Commission should consider. George did note that the simple phrasing of the question ignored the different types of learning that can occur. He mentioned teacher-led discussions, student-to-student learning, and time that learners spend individually with materials as examples. He expressed concern over grouping all learning activities together. Doug concluded the discussion by sharing a reflection from the [October 26 meeting of the Digital Learning Advisory Council](#): the lack of responses reflecting novel uses of technology may not be surprising, given that school during the pandemic did not represent consistent adoption of best practices in remote and blended learning, but a temporary, stop-gap response to school and university closures.

Eduroam Survey and Legal Terms



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The Advisory Council has long endorsed the adoption of the [Eduroam](#) authentication system — widely adopted in higher education — across schools and libraries. Tom asked Ryan to share preliminary results from an ongoing CEN survey of library and district technology leaders on their readiness to deploy Eduroam so that students could use their school credentials to get onto wireless networks hosted by colleges, libraries, community centers, and other institutions that have adopted Eduroam. Key readiness components include an enterprise wireless management system, an identity store (directory), and a Remote Authentication Dial-In User Service (RADIUS) server. He briefly shared the survey results to date with Advisory Council members.

Of the 119 respondents, more than 90 percent indicated having a wireless access point control system, and 80 percent have an identity store. A little more than half of the institutions run RADIUS servers. Among respondents, 77 percent were open to running an Eduroam pilot at their school or library, and 82 percent would welcome more information about the system. Respondents did express concern about the human resources and licensing costs to sustain Eduroam over time. Ryan will leave the survey open to gather additional responses.

Tom expressed enthusiasm that the results so far indicate a high level of readiness to deploy Eduroam. Ryan is developing a working document that CEN may use to apply for an Internet2 program that supports Eduroam deployments outside of higher education. Additional funding and expertise would further the goal of having statewide access for students to a secure, educational wireless network via Eduroam.

Doug mentioned that, among school leaders, one perceived barrier to adoption of Eduroam is the lack of current presence outside of colleges and universities. He shared that the next phase of CEN's [Community Wireless](#) initiative will include an Eduroam component. The end result will be hundreds of additional wireless access points that allow students to connect via Eduroam.

Ryan raised the issue of schools, libraries, and other institutions needing to sign the Eduroam terms of use in order to deploy the service. He and Doug have pursued an informal legal review of those terms to identify and address any potential language that may pose a barrier to adoption.

Adjournment

Tom adjourned the meeting at 2:30 PM, thanking the members for their continued engagement and passion to ensure universal access to learning opportunities through technology.